

## REMARKS

In an office action dated December 3, 2002, the Examiner rejected claims 1, 6, 7 and 10 under 35 USC § 102(b) anticipated by *Sides*, rejected claims 2-5 under 35 USC § 103 as obvious in light of *Sides* and *Sacks* and rejected claims 8 and 9 under 35 USC § 103 as obvious in light of *Sides* and *Staples*. The Applicant respectfully submits that the Examiner is mistaken.

The Examiner also objected to the drawings. In response, the Applicant submits amendments to drawings nos. 1-9, 11, and 14, as shown in the accompanying amendments to the drawings. Reference to a Figure 15 has also been deleted from the specification. This is believed to overcome the Examiner's objections to the drawings.

### **I. THE REJECTION OF CLAIMS 1, 6, 7, AND 10 AS ANTICIPATED BY SIDES UNDER 35 U.S.C. § 102(B)**

The Examiner rejected claims 1, 6, 7 and 10 as anticipated by *Sides*. The Applicants respectfully submit that the Examiner is mistaken.

Loosely speaking, claim 1 recites a first heater for heating a column to a first desired temperature and a second heater for heating a carrier gas stream to a second desired temperature, wherein the carrier gas target temperature is higher than the column target temperature. The Examiner rejected this claim on the basis of the teaching in *Sides* of a separation of column (17), upstream valve switch (11), upstream carrier gas (12), column heater (24), and a preconcentrator heater (15). *See* office action of 12/03/02, p. 4.

A fallacy in the Examiner's rejection is that while rapidly heating the solid sorbent of the preconcentrator tube to 200 degrees Celsius would heat the carrier gas passing through the preconcentrator tube to a certain extent, the question remains: what is the resulting temperature of carrier gas? For example, the *Sides* patent provides no discussion of the initial temperature of the

carrier gas. In addition, how quickly is the carrier gas passing through the preconcentrator tube? A person may pass his hand through an open flame without burning it if done quickly enough; just because the carrier gas is temporarily proximate to something at 200 degrees Celsius does not mean that the carrier gas is heated to 200 degrees Celsius. Is the carrier gas heated to a temperature in *Sides* above that of the column? The Applicant submits that the answer is pure speculation. Similarly *Sides* simply does not teach whether the carrier gas is heated to a temperature at least five degrees above that of the column as required by claim 6.

With respect to claim 7, the Examiner points to fan (26). However, as disclosed at *Sides*, Col. 4, 11. 40-44, during operation of fan 26 (mistakenly identified by reference numeral 16 in this passage), the carrier stream exits valve (18). Thus, while there is a means to cool the column, there is not means to cool the carrier gas stream. Allowance of claim 7 is respectfully sought.

Claim 10 is allowable in addition to the reasons argued with respect to claim 1 because *Sides* does not teach heating the carrier gas passing through the preconcentrator tube to a series of predetermined temperatures.

## **II. THE REJECTION OF CLAIMS 2-5 AS OBVIOUS IN LIGHT OF SIDES AND SACKS**

The Examiner rejected claims 2-5 as obvious in light of *Sides* and *Sacks*. The Applicant respectfully submits that the Examiner is mistaken.

Loosely speaking, claim 2 recites (in addition to the elements of claim 1) an effective back pressure restrictor upstream of the column. The term effective backpressure restrictor is defined at p. 18 of the instant specification. Claim 4 recites a back pressure restrictor upstream of the valve switch. The Examiner contends that *Sacks* teaches a valve (12) upstream of a gas chromatograph having two capillary tubes (18, 40), at the claimed locations which act to restrict back pressure.

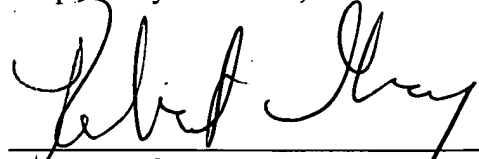
Referring initially to the rejection of claim 2 and referring to the Examiners use of *Sacks* tube (40) as upstream of the column (as seen in *Sacks* Fig. 2), *Sacks* describes and shows back pressure restrictor (40) as downstream of outlet 22. See *Sacks*, Figure 2. Claim 2 in contrast, requires that the back pressure restrictor be upstream of the column. Given that back pressure restrictor 40 is not upstream of anything, it cannot be upstream of the column.

The Applicant refers next to the rejection of claim 4, and to the Examiner's use of *Sacks* tube 18 as upstream of a valve. While the Applicant does not intend to limit the term valve to a specific mechanical structure, the Applicant is unclear what the Examiner considers a "valve" in *Sacks* downstream of tube (18). Further, although tube 18 is described by *Sacks* as a capillary tube it is not clear whether capillary tube (18) is of sufficient length to constitute a back pressure restrictor. For *Sacks* to constitute a reference under 35 U.S.C. § 102, it must teach every element claimed, either expressly or inherently. For an element to be inherently present, it must necessarily be present. It is not clear that the feature allegedly in *Sacks* is necessarily present in *Sacks*.

**CONCLUSION**

Allowance of all the claims is respectfully sought.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Robert M. Gray", written over a horizontal line.

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